



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/001,430	10/31/2001	Roland M. Hochmuth	10017761-1	2418

7590 03/26/2004  
HEWLETT-PACKARD COMPANY  
Intellectual Property Administration  
P. O. Box 272400  
Fort Collins, CO 80527-2400

EXAMINER

CHUNG, DANIEL J

ART UNIT	PAPER NUMBER
----------	--------------

2672

DATE MAILED: 03/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/001,430

Applicant(s)

HOCHMUTH ET AL.

Examiner

Daniel J Chung

Art Unit

2672

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

Claims 1-28 are presented for examination. This office action is in response to the amendment filed on 1-7-2004.

#### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

**Claims 1-2,4-6,8-11 and 26-27 are rejected under 35 U.S.C. 102(e) as being anticipated by Hayashi et al. (6,160,544)**

Regarding claim 1, Hayashi et al discloses that the claimed feature of a graphics adapter [38,50], comprising: a frame buffer ["memory"] operable to store graphics image data [i.e. "video information"] (See col 9 line 44-45); and a network interface [68,94] operable to receive at least a portion of graphics image data, network interface further operable to format received graphics image data into a plurality of packets ["packet"] for transmission over a communication network. (See Fig 2, Fig 8, col 2 line 64-col 3 line 13, col 4 line 57-62)

Regarding claim 2, Hayashi et al discloses that a network interface port coupled to network interface, plurality of packets being transmitted from network interface to communication network via network interface port. (See col 9 line 13-16, col 10 line 53-col 11 line 9)

Regarding claim 4, Hayashi et al discloses that a compression unit [66] coupled to frame buffer and operable to compress graphics image data of frame buffer into compressed graphics image data. (See col 2 line 64-col 3 line 13)

Regarding claim 5, Hayashi et al discloses that network interface further operable to format compressed graphics image data [i.e. "MPEG"] into a plurality of packets for transmission over communication network. (See col 2 line 64-col 3 line 13)

Regarding claim 6, Hayashi et al discloses that a video transmitter operable to transmit graphics image data from frame buffer to a processor-based system [i.e. 40, 44] associated with graphics adapter. (See Fig 2)

Regarding claims 8-9, Hayashi et al discloses that a video output port coupled to video transmitter, graphics image data being transmitted from frame buffer via video output port, which video output port is selected from the group consisting of an analog video port and a digital video port. (See col 2 line 64-col 3 line 13)

Regarding claims 10-11, Hayashi et al discloses that plurality of packets being transmitted to at least one destination device, and a first selected plurality of plurality of packets is for transmission to a first destination device and a second selected plurality of plurality of packets is for transmission to a second destination device. (See col 2 line 64-col 3 line 13)

Regarding claims 26-27, claims 26-27 are similar in scope to the claims 1-2, and thus the rejections to claims 1-2 hereinabove are also applicable to claims 26-27.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 3,7 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayashi et al . (6,160,544)**

Regarding claims 3 and 7, Hayashi et al fails to disclose that network interface port is selected from the group consisting of an Ethernet port, an Infiniband port, and a wireless network transceiver, and video transmitter is selected from the group consisting

of a RAMDAC and a DVI transmitter. However, such features are well-known (commercially available) in an analogous art, in order to permit many more modes which can be placed farther apart, to fully support additional bandwidth, to conveniently interconnect each nodes without physical link cables, to improve compatibility of both analog and digital graphic data, in developing a channel-based, switched-network-topology interconnect standard. Therefore, it would have been obvious to incorporate the above features into the teaching of Hayashi et al for performing a digital video system with optimization.

Regarding claim 28, claim 28 is similar in scope to the claim 3, and thus the rejections to claim 3 hereinabove is also applicable to claim 28.

**Claims 12-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayashi et al in view of Schneider et al. (6,304,895)**

Regarding claim 12, Hayashi et al discloses that the claimed feature of a method for transmitting graphics image data over a communication network, comprising: [logically dividing a frame buffer of a graphics adapter into a plurality of segments, each of plurality of segments storing graphics image data corresponding to a destination device of a plurality of destination devices]; selecting a segment of plurality of segments corresponding to a destination device of plurality of destination devices; and

formatting at least a portion of graphics image data stored in selected segment ["memory"] into a plurality of packets ["packet"] for transmission by a network interface [68,94] of graphics adapter [38,50] to destination device [40,44] over communication network. (See Fig 2, Fig 8, col 2 line 64-col 3 line 13, col 4 line 57-62)

Hayashi et al does not specifically discloses that "logically dividing a frame buffer into a plurality of segments." However, such limitation is shown in the teaching of Schneider et al. ["memory is physically divide into pages"; See col 12 line 43-col 13 line 23] It would have been obvious to one skilled in the art to incorporate the teaching of Schneider et al into the teaching of Hayashi et al, in order to improve the performance of memory with faster identification/retrieval of graphic data, as such improvement is also advantageously desirable in the teaching of Hayashi et al for performing the video distribution system with optimization.

Regarding claim 13, Hayashi et al discloses that transmitting plurality of packets to destination device over communication network. (See col 2 line 64-col 3 line 13)

Regarding claims 14-15, refer to the discussion for the claim 12 hereinabove, Schneider et al further discloses that receiving an update request from destination device of plurality of destination devices prior to selecting step and selecting step comprising selecting, in response to receiving update request, segment of plurality of

segments corresponding to destination device of plurality of destination devices. (See col 14 line 8-25, col 14 line 58-col 15 line 32)

Regarding claims 16-17, Hayashi et al discloses that adding identification information identifying destination device to each of plurality of packets, where identification information is an Internet Protocol (IP) address of destination device ["TCP/IP"]. (See Fig 7)

Regarding claim 18, Hayashi et al discloses that transmitting plurality of packets to another destination device of plurality of destination devices. (See col 2 line 64-col 3 line 13)

Regarding claim 19, refer to the discussion for the claim 12 hereinabove, Hayashi et al does not specifically discloses that "comparing graphics image data of a new image for a destination device with graphics image data of a previous image for destination device stored in a frame buffer of a graphics adapter remote from destination device; selecting blocks of graphics image data of new image that are different from corresponding blocks of graphics image data of previous image." However, such limitations are shown in the teaching of Schneider et al. (See col 8 line 25-42) It would have been obvious to one skilled in the art to incorporate the teaching of Schneider et al into the teaching of Hayashi et al, in order to communicate the graphical data with reducing the size of graphic data and minimizing the usage of bandwidth,



where image update or modification is required within the network, as such improvement is also advantageously desirable in the teaching of Hayashi et al for transmitting of the updated/requested digital data with faster time at the reduced hardware (i.e. bandwidth).

Regarding claim 20, Hayashi et al discloses that transmitting plurality of packets to at least one destination device over communication network. (See col 2 line 64-col 3 line 13)

Regarding claim 21, Hayashi et al discloses that compressing selected blocks of graphics image data prior to formatting selected blocks of graphics image data. (See col 2 line 64-col 3 line 13)

Regarding claims 22-24, Hayashi et al discloses that adding identification information identifying selected blocks to plurality of packets and identification information comprises block numbers for selected blocks and coordinate information for a plurality of corners of selected blocks. (See Fig 7)

Regarding claim 25, Hayashi et al discloses that waiting for a request for graphics image data from at least one of at least one destination device. (See col 2 line 64-col 3 line 13)

### ***Response to Arguments***

Applicant's arguments with respect to claims 1-28 have been considered but are moot in view of the new ground(s) of rejection. Specifically, regarding to the claim 1, applicant argued that the cited reference do not discloses that "frame buffer" and "network interface" are part of a graphics adapter. However, the recitation "a graphics adapter" has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951). Furthermore, newly submitted reference (Hayashi) now clearly shows such limitations. (See the rejection hereinabove)

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel J. Chung whose telephone number is (703) 306-3419. He can normally be reached Monday-Thursday and alternate Fridays from 7:30am- 5:00pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael, Razavi, can be reached at (703) 305-4713.

**Any response to this action should be mailed to:**

Application/Control Number: 10/001,430  
Art Unit: 2672

Page 10

Commissioner of Patents and Trademarks  
Washington, D.C. 20231


**or faxed to:**

**(703) 872-9314 (for Technology Center 2600 only)**

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal  
Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or  
proceeding should be directed to the Technology Center 2600 Customer Service Office  
whose telephone number is (703) 306-0377.

djc  
March 15, 2004



**MICHAEL RAZAVI**  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600